



**DEFENSE LOGISTICS AGENCY**  
DEFENSE NATIONAL STOCKPILE CENTER  
8725 JOHN J. KINGMAN ROAD, SUITE 4616  
FT. BELVOIR, VIRGINIA 22060-6220



April 21, 2000

**AMENDMENT NO. 002  
TO  
SOLICITATION OF OFFERS FOR  
ANTIMONY  
UNDER DLA-ANTIMONY-002**

*The above referenced Solicitation for the sale of Antimony issued October 29, 1999 is hereby amended as follows:*

- 1. Delete Section I.2 Item Offer Page-DLA-ANTIMONY-002 February 2000 in its entirety and insert Section I.2 Item Offer Page-DLA-ANTIMONY-002 May 2000.*
- 2. Delete Section J.4 Material Safety Data Sheet (Mar 95) and insert attached Section J.4 Material Safety Data Sheet (Jun 99).*
- 3. Correct Section I.9 Persons Authorized to Request Shipment of Material (JUL 95) to read:*

*The Offeror shall provide the name(s), title(s), signature(s), and telephone number(s) of representative(s) authorized to sign Section J.3 Shipping Instructions.*

- 4. The next offering will be held at 2:30 p.m. , local time, Ft. Belvoir, VA, Monday, May 15, 2000.*

*Offerors shall acknowledge receipt of this Amendment by signing in the space provided below and returning this form to:*

*Attn: DNSC-L/Bid Custodian  
Defense National Stockpile Center  
8725 John J. Kingman Road  
Suite 4616 (Mail) or Suite 4528 (Hand Delivered)  
Fort Belvoir, VA 22060-6223  
Facsimile No. (703) 767-5541*

*Failure to acknowledge receipt of this Amendment may result in the offeror being ineligible for award.*

*Except as provided herein, all other terms and conditions of DLA-ANTIMONY-002 remain unchanged and in full force and effect.*

*NAME OF FIRM:* \_\_\_\_\_

*ADDRESS:* \_\_\_\_\_

*BY:* \_\_\_\_\_

*SIGNATURE:* \_\_\_\_\_

*TITLE:* \_\_\_\_\_

*DATE:* \_\_\_\_\_

ITEM	DESCRIPTION	UNIT WEIGHT LBS/BUNDLE BOX	QUANTITY LBS	LOCATION	QUANTITY LBS	PRICE LBS.	TOTAL OFFER PRICE
29	Antimony Ingots, Grade B in wooden boxes. Brand - Unknown	246 lbs/ Box	3,121,280	Somerville, NJ	_____	\$ _____	\$ _____
32	Antimony Cakes, Grade B Banded - Brand O&G - 37 Cakes/Bundle	2,220 Lbs/ Bundle	944,731	New Haven	_____	\$ _____	\$ _____
33	Antimony Ingots, Grade B Banded - 37 Ingots/Bundle Brand- Unknown	2,220 Lbs/ Bundle	822,180	Point Pleasant, WV	_____	\$ _____	\$ _____

COMPANY: \_\_\_\_\_

NAME AND TITLE: \_\_\_\_\_

SIGNATURE AND DATE: \_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

FAX NUMBER: \_\_\_\_\_

ITEM	DESCRIPTION	UNIT WEIGHT LBS/BUNDLE	QUANTITY LBS	LOCATION	QUANTITY	PRICE	TOTAL OFFER
34	Antimony Cakes, Grade B Banded/Drums - Brand BM- 62 Cakes/ Bundle-200 Drums	2150Lbs/ Bundle 400-550 Lbs/ Drum	384,073	New Haven	_____	\$ _____	\$ _____
35	Antimony Ingots, Grade B Banded - 37 Ingots/Bundle Brand - RMM	2,220 Lbs/ Bundle	672,000	New Haven	_____	\$ _____	\$ _____

COMPANY: \_\_\_\_\_

NAME AND TITLE: \_\_\_\_\_

SIGNATURE AND DATE: \_\_\_\_\_

TELEPHONE NUMBER: \_\_\_\_\_

FAX NUMBER: \_\_\_\_\_

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SECTION 1        CHEMICAL PRODUCT AND COMPANY IDENTIFICATION  
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DEFENSE LOGISTICS AGENCY  
DEFENSE NATIONAL STOCKPILE CENTER  
8725 JOHN J. KINGMAN ROAD  
SUITE 3339  
FORT BELVOIR, VA 22060-6223

EMERGENCY TELEPHONE NUMBER:  
1-800-424-9300 (NORTH AMERICA)  
1-703-527-3887 (INTERNATIONAL)

SUBSTANCE: ANTIMONY

## TRADE NAMES/SYNONYMS:

ANTIMONY BLACK; ANTIMONY REGULUS; STIBIUM; ANTIMONY ELEMENT; C.I. 77050; Sb;  
DLA01611; RTECS CC4025000

CHEMICAL FAMILY: metal

CREATION DATE: Mar 14 1995

REVISION DATE: Jun 02 1999

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SECTION 2        COMPOSITION, INFORMATION ON INGREDIENTS  
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COMPONENT: ANTIMONY

CAS NUMBER: 7440-36-0

EC NUMBER (EINECS): 231-146-5

PERCENTAGE: 100.0

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SECTION 3        HAZARDS IDENTIFICATION  
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NFPA RATINGS (SCALE 0-4): HEALTH=2 FIRE=0 REACTIVITY=0

EC CLASSIFICATION (CALCULATED):

Xi Irritant

R 36-37-38

## EMERGENCY OVERVIEW:

PHYSICAL DESCRIPTION: Silvery-white lustrous metal in pig, ingot or tub form.

MAJOR HEALTH HAZARDS: respiratory tract irritation, skin irritation, eye  
irritation

PHYSICAL HAZARDS: Dust/air mixtures may ignite or explode.

## POTENTIAL HEALTH EFFECTS:

## INHALATION:

SHORT TERM EXPOSURE: irritation, metallic taste, nausea, vomiting, diarrhea,  
headache, dizziness

LONG TERM EXPOSURE: loss of voice, difficulty breathing, lung damage

## SKIN CONTACT:

SHORT TERM EXPOSURE: irritation, itching

LONG TERM EXPOSURE: rash

## EYE CONTACT:

SHORT TERM EXPOSURE: irritation

LONG TERM EXPOSURE: same as effects reported in short term exposure

## INGESTION:

SHORT TERM EXPOSURE: nausea, vomiting, diarrhea, liver damage, coma

LONG TERM EXPOSURE: loss of voice, headache, dizziness

## CARCINOGEN STATUS:

OSHA: N

NTP: N

IARC: N

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SECTION 4 FIRST AID MEASURES  
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INHALATION: Remove from exposure immediately. Use a bag valve mask or similar device to perform artificial respiration (rescue breathing) if needed. Get medical attention.

SKIN CONTACT: Remove contaminated clothing, jewelry, and shoes immediately. Wash with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention, if needed.

EYE CONTACT: Wash eyes immediately with large amounts of water or normal saline, occasionally lifting upper and lower lids, until no evidence of chemical remains. Get medical attention immediately.

INGESTION: Contact local poison control center or physician immediately. Never make an unconscious person vomit or drink fluids. When vomiting occurs, keep head lower than hips to help prevent aspiration. If person is unconscious, turn head to side. Get medical attention immediately.

ANTIDOTE: dimercaprol/oil, intramuscular.

NOTE TO PHYSICIAN: For ingestion, consider gastric lavage and catharsis.

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SECTION 5 FIRE FIGHTING MEASURES  
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FIRE AND EXPLOSION HAZARDS: Negligible fire and explosion hazard in bulk form. Dust/air mixtures may ignite or explode.

EXTINGUISHING MEDIA: dolomite, dry powder for metal fires, sand, graphite, soda ash, sodium chloride

Do not get water directly on material.

FIRE FIGHTING: Move container from fire area if it can be done without risk. Cool containers with water spray until well after the fire is out. Stay away from the ends of tanks. For fires in cargo or storage area: Cool containers with water from unmanned hose holder or monitor nozzles until well after fire is out. If this is impossible then take the following precautions: Keep unnecessary people away, isolate hazard area and deny entry. Let the fire

burn. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products.

LOWER FLAMMABLE LIMIT: 0.42 oz/ft<sup>3</sup>

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SECTION 6 ACCIDENTAL RELEASE MEASURES  
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OCCUPATIONAL RELEASE:

Notify Local Emergency Planning Committee and State Emergency Response Commission for release greater than or equal to RQ (U.S. SARA Section 304). If release occurs in the U.S. and is reportable under CERCLA Section 103, notify the National Response Center at (800)424-8802 (USA) or (202)426-2675 (USA).

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SECTION 7 HANDLING AND STORAGE  
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Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.

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SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION  
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EXPOSURE LIMITS:

ANTIMONY:

0.5 mg/m<sup>3</sup> OSHA TWA  
0.5 mg/m<sup>3</sup> ACGIH TWA  
0.5 mg/m<sup>3</sup> NIOSH recommended TWA 10 hour(s)  
0.5 mg/m<sup>3</sup> DFG MAK 4 times/shift (total dust)  
0.5 mg(Sb)/m<sup>3</sup> UK OES TWA

MEASUREMENT METHOD: Particulate filter; Acid; Atomic absorption spectrometry; NIOSH II(4) # 261, P&CAM

VENTILATION: Provide local exhaust ventilation system. Ensure compliance with applicable exposure limits.

EYE PROTECTION: Eye protection not required under normal conditions.

CLOTHING: Protective clothing is not required under normal conditions.

GLOVES: Wear appropriate chemical resistant gloves.

RESPIRATOR: No respirator is required under normal conditions of use. Under conditions of frequent use or heavy exposure, respiratory protection may be needed.

Measurement Element:

Antimony (Sb)

5 mg/m<sup>3</sup>

Any dust and mist respirator.

Any supplied-air respirator.

12.5 mg/m<sup>3</sup>

Any supplied-air respirator.

Any powered, air-purifying respirator with a dust and mist filter.

25 mg/m<sup>3</sup>

Any air-purifying respirator with a full facepiece and a high-efficiency particulate filter.

Any supplied-air respirator with a full facepiece.

Any self-contained breathing apparatus with a full facepiece.

Any supplied-air respirator with a full facepiece.

50 mg/m<sup>3</sup>

Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode.

Escape -

Any air-purifying respirator with a full facepiece and a high-efficiency particulate filter.

Any appropriate escape-type, self-contained breathing apparatus.

For Unknown Concentrations or Immediately Dangerous to Life or Health -

Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply.

Any self-contained breathing apparatus with a full facepiece.

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## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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PHYSICAL DESCRIPTION: Silvery-white lustrous metal in pig, ingot or tub form.

MOLECULAR WEIGHT: 121.75

MOLECULAR FORMULA: SB

BOILING POINT: 3182 F (1750 C)

MELTING POINT: 1166 F (630 C)

VAPOR PRESSURE: 1 mmHg @ 886 C

VAPOR DENSITY: Not applicable

SPECIFIC GRAVITY (water=1): 6.684

WATER SOLUBILITY: insoluble

PH: Not applicable

VOLATILITY: Not applicable

ODOR THRESHOLD: Not available

EVAPORATION RATE: Not applicable

COEFFICIENT OF WATER/OIL DISTRIBUTION: Not available

SOLVENT SOLUBILITY:

Soluble: ammonium sulfide solutions, hot sulfuric acid

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## SECTION 10 STABILITY AND REACTIVITY

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REACTIVITY: Stable at normal temperatures and pressure.

CONDITIONS TO AVOID: None reported.

INCOMPATIBILITIES: acids, oxidizing materials, metals, halogens, combustible materials, peroxides, metal oxides, bases, metal salts

ANTIMONY:

ACIDS: Moderate to violent reaction.

ALKALINE NITRATES: Explosive reaction possible.  
ALUMINUM (POWDERED): Violent reaction on heating.  
AMMONIUM NITRATE: Explosive reaction with powdered antimony.  
AQUA REGIA: Readily attacks antimony.  
BROMINE: Spontaneous ignition.  
BROMINE PENTAFLUORIDE: Contact at ambient or slightly elevated temperatures may result in violent ignition.  
BROMINE TRIFLUORIDE: Violent reaction with incandescence.  
BROMOAZIDE: Explosion on contact.  
CHLORIC ACID: Forms explosive compound.  
CHLORINE (GAS): Spontaneous ignition.  
CHLORINE (LIQUID): Spontaneous ignition at 33 C.  
CHLORINE MONOXIDE (GAS): Violent explosion on contact.  
CHLORINE TRIFLUORIDE: Contact at ambient or slightly elevated temperatures may result in violent ignition.  
DICHLORINE OXIDE: Explosion on contact.  
DISULFUR DIBROMIDE: Violent reaction with finely divided antimony.  
FLUORINE: Spontaneous ignition.  
HALOGENATED ACIDS: Incompatible.  
IODINE: Ignition reaction; large amounts may result in explosion.  
IODINE PENTAFLUORIDE: Incandescent reaction.  
NITRATE SALTS: Vigorous or violent reaction.  
NITRIC ACID: Violent reaction with finely divided antimony.  
NITROSYL FLUORIDE: Incandescent reaction.  
OXIDIZERS: Fire and explosion hazard.  
PERCHLORIC ACID: Hazardous reaction with trivalent antimony.  
PEROXIDES (MIXTURES): May react explosively.  
POTASSIUM DIOXIDE: Oxidation reaction with incandescence.  
POTASSIUM NITRATE: Explosive reaction with powdered antimony.  
POTASSIUM PERMANGANATE: Ignites on grinding in mortar.  
POTASSIUM PEROXIDE: Formation of explosive mixture.  
SELENINYL CHLORIDE: Ignition on contact with powdered antimony.  
SODIUM NITRATE: Explosive reaction with powdered antimony.  
SODIUM PEROXIDE: Formation of explosive mixture on heating.  
SULFURIC ACID: Readily attacked.

#### HAZARDOUS DECOMPOSITION:

Thermal decomposition products: antimony compounds, antimony

POLYMERIZATION: Will not polymerize.

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## SECTION 11 TOXICOLOGICAL INFORMATION

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#### ANTIMONY:

##### TOXICITY DATA:

7 gm/kg oral-rat LD50; 100 mg/kg intraperitoneal-rat LD50; 90 mg/kg intraperitoneal-mouse LD50; 150 mg/kg intraperitoneal-guinea pig LD50

##### LOCAL EFFECTS:

Irritant: inhalation, skin, eye

##### ACUTE TOXICITY LEVEL:

Slightly Toxic: ingestion

##### TUMORIGENIC DATA:



50 mg/m3 inhalation-rat TCLo/7 hour(s)-52 week(s) intermittent

## HEALTH EFFECTS:

### INHALATION:

#### ACUTE EXPOSURE:

**ANTIMONY:** Inhalation of antimony or its compounds may cause irritation of the respiratory and gastrointestinal tracts, sore throat, shallow respiration, dizziness, weight loss, gingivitis, anemia, eosinophilia, and inhibition of some enzyme systems, such as protein or carbohydrate metabolism. Pulmonary congestion, edema and death due to respiratory or circulatory failure may occur. Pathologic findings include acute congestion of the heart, liver, and kidneys. Metal fume fever, an influenza-like illness, may occur due to the inhalation of freshly formed fumes sized below 1.5 microns and usually between 0.02-0.05 microns. Symptoms may be delayed 4-12 hours and begin with a sudden onset of thirst and a sweet, metallic or foul taste in the mouth. Other symptoms may include upper respiratory tract irritation accompanied by coughing and a dryness of the mucous membranes, lassitude, and a generalized feeling of malaise. Fever, chills, muscular pain, mild to severe headache, nausea, occasional vomiting, exaggerated mental activity, profuse sweating, excessive urination, diarrhea, and prostration may also occur. Tolerance to fumes develops rapidly, but is quickly lost. All symptoms usually subside within 24-36 hours.

#### CHRONIC EXPOSURE:

**ANTIMONY:** Repeated or prolonged inhalation of antimony or its compounds may cause stomatitis, dry throat, metallic taste, gingivitis, septal and laryngeal perforation, laryngitis, headache, dyspnea, indigestion, nausea, vomiting, diarrhea, anorexia, anemia, weight loss, pain or tightness in the chest, sleeplessness, muscular pain and weakness, dizziness, pharyngitis, bronchitis, and pneumonitis. Degenerative changes of the liver and kidneys may occur later. Benign pneumoconiosis and obstructive lung diseases has been reported in workers. Women may be more susceptible to the systemic effects of exposure. Antimony crosses the placenta, is present in amniotic fluid, and is excreted in human milk. A study reported an increased incidence of spontaneous late abortions, premature births, and gynecological problems among female antimony smelter workers. An excess of deaths from lung cancer has been reported in smelter workers with more than 7 years exposure to relatively high levels of antimony dust and fumes. Animal studies indicate that antimony dust causes pathological changes in cardiac muscle and may induce interstitial pneumonitis and endogenous lipoid pneumonia. As evaluated by RTECS, administration to rats by inhalation resulted in a statistically significant increase in the incidence of carcinogenic tumors of the lungs and thorax.

### SKIN CONTACT:

#### ACUTE EXPOSURE:

**ANTIMONY:** Direct contact with dusts from antimony or its compounds may cause irritation with itching.

#### CHRONIC EXPOSURE:

**ANTIMONY:** Repeated or prolonged contact with antimony or its compounds may cause itching skin, papules and pustules around sweat and sebaceous glands, but rarely around the face, and dermatitis. Prolonged exposure by antimony smelter workers resulted in skin rashes on forearms and thighs

resembling chicken pox pustules.

EYE CONTACT:

ACUTE EXPOSURE:

ANTIMONY: Direct contact with dust or fumes may cause irritation and inflammation of the cornea.

CHRONIC EXPOSURE:

ANTIMONY: Repeated or prolonged exposure may cause conjunctivitis.

INGESTION:

ACUTE EXPOSURE:

ANTIMONY: Ingestion of antimony or its compounds may cause violent irritation of the nose, throat, stomach, and intestines, nausea, vomiting, severe diarrhea with mucous and later with blood, slow and shallow respiration, and low blood pressure. Hemorrhagic nephritis and hepatitis may occur concomitantly or follow later. Pulmonary congestion and edema, coma, and death from circulatory or respiratory failure may occur.

CHRONIC EXPOSURE:

ANTIMONY: Repeated or prolonged ingestion of antimony or its compounds may cause sores in the mouth and throat, dry throat, gingivitis, laryngitis, headache, indigestion, nausea, vomiting, diarrhea, anorexia, anemia, weight loss, sleeplessness, and dizziness. Degenerative liver and kidney changes may occur later. Women may be more susceptible to the systemic effects from antimony exposure. Antimony crosses the placenta, is present in amniotic fluid, and is excreted in human milk.

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SECTION 12      ECOLOGICAL INFORMATION  
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ECOTOXICITY DATA:

FISH TOXICITY: >6200 - <8300 ug/L 96 hour(s) LC50 (Mortality) Sheepshead minnow (*Cyprinodon variegatus*)

INVERTEBRATE TOXICITY: >4150 ug/L 96 hour(s) LC50 (Mortality) Opossum shrimp (*Mysidopsis bahia*)

ALGAL TOXICITY: >4150 ug/L 96 hour(s) EC50 (Photosynthesis) Diatom (*Skeletonema costatum*)

FATE AND TRANSPORT:

BIOCONCENTRATION: 14.00 uCi/L NR month(s) BCF (Residue) Toothed wrack (*Fucus serratus*) 2 uCi/L

ENVIRONMENTAL SUMMARY:

Toxic to aquatic life.

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SECTION 13      DISPOSAL CONSIDERATIONS  
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Dispose in accordance with all applicable regulations.

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SECTION 14      TRANSPORT INFORMATION  
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No classification assigned.

LAND TRANSPORT ADR/RID: No classification assigned.

AIR TRANSPORT IATA/ICAO: No classification assigned.

MARITIME TRANSPORT IMDG: No classification assigned.

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SECTION 15      REGULATORY INFORMATION  
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## U.S. REGULATIONS:

TSCA INVENTORY STATUS: Y

TSCA 12(b) EXPORT NOTIFICATION: Not listed.

CERCLA SECTION 103 (40CFR302.4): Y

ANTIMONY: 5000 LBS RQ

SARA SECTION 302 (40CFR355.30): N

SARA SECTION 304 (40CFR355.40): N

SARA SECTION 313 (40CFR372.65): Y

ANTIMONY

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40CFR370.21):

ACUTE: Y

CHRONIC: N

FIRE: N

REACTIVE: N

SUDDEN RELEASE: N

OSHA PROCESS SAFETY (29CFR1910.119): N

## STATE REGULATIONS:

California Proposition 65: N

## EUROPEAN REGULATIONS:

EC NUMBER (EINECS): 231-146-5

## EC RISK AND SAFETY PHRASES:

R 36            Irritating to eyes.

R 37            Irritating to respiratory system.

R 38            Irritating to skin.

S 2            Keep out of reach of children.

S 24            Avoid contact with skin.

S 25            Avoid contact with eyes.

S 26            In case of contact with eyes, rinse immediately with plenty  
of water and seek medical advice.

S 46            If swallowed, seek medical advice immediately and show this  
container or label.

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SECTION 16      OTHER INFORMATION  
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